the corridor, it comes down and stops at zero, zero.
CC Very good.
SC Going test five. Perfect, again. Okay, now I'm going to range set.
CC Okay.
SC Stand by.
CC Okay.
SC Okay, that was perfect.
CC Real fine. Okay, Apollo 8, I'd like to run one more null bias and looks like we will have exercised everything that we can get to.
SC Okay. Delta V, auto, All zeros. Minus two.
CC Roger, understand minus two. All right, is minus two or minus two tenths?
SC Two tenths, three tenths now.
CC Okay, real good, it looks like we -
SC It looks like we had a lot of noise on the circuit for awhile there, Jim.
CC Yes, we did, too. Electronic glitches I guess.
SC Okay, 100 seconds plus minus four tenths.
CC Okay, real fine. That looks like that's about all the functions that we can check and looks like everything is just down the line.
SC Roger.
CC Okay, we still owe you confirmation that you can expect you high speed goal to be a first pattern you come to and I'll let you know as soon as they come in with an answer on it. I'd like to go ahead and finish going through the entry book if you're ready?
SC Roger.
CC Okay, we've reviewed most of the book up here and we will have to come back in and pick up the way that we can pick up the water boiler prior to getting reentry area. We've reviewed all the last minutes changes that were put in pen and ink type things and they're all looking good. on page E7 like to add a couple of items.
SC What's that?
CC Okay, on step 34 under final stowage which is for the catch all area there's a step that says secodary glycol to radiator that says bypass verifying. while we are down in this area we would like to go to panel 382, the water control panel, and set up the evaporator water control valve both primary and secondary to auto. Now this is something we would have done had we done the cold soak at minus 12 hours, but since we were not doing it there we would like to go ahead and make sure we have these in auto, this will enable automatic controls from the panel.

SC Shall we just make this part of the procedure when we test out the water boilers beforehand?

CC Yes, sir, if we get that checked out earlier we can just leave them in auto.

SC I'd rather do that.

CC Okay, I'm just going to make a note here and we can do it the other way, too. Another item we'd better mention -

END OF TAPE

CAPCOM You may already have this down as step 35. It says uptelemetry to block, verify, and there's a step right after that that says RCS command module heaters' two circuit breakers closed.

SC Roger.

CAPCOM Okay, okay I guess that one was the one sent up to you this afternoon. And when you turn the page over to E8, it shows the EMS entry check being run at an minus hour. And you know that it is a short test. There is really no reason to wait for an hour. We might as well and go ahead and do that as soon as you get through with step 35 on page E7 because we're coming upon a pretty busy period.

SC I say that's fine, we'll do that. Houston, are you still there?

CAPCOM Right, we got a discussion going. Be right back. Okay Apollo 8, page E9.

SC Okay.

CAPCOM At the top of the page you have step 38 and right underneath that prior to step 39, we want to have a primary glycol loop activation. What we are going is is get the glycol evaporator water switched to auto and the glycol evaporator steam pressure switched to auto. This will get your primary water boiler on the line prior to entry. Or at least it will enable it.

SC Okay, tell me what to write in, Jim.

CAPCOM Okay. It's glycol evaporator water to AUTO. Apollo 8, Houston ...

SC Glycol evaporator water switched to AUTO.

CAPCOM Okay, and the second switch is the glycol evaporator steam pressure to AUTO.

SC Okay.

CAPCOM Okay, that takes care of getting the primary water boiler enabled and it is to my understanding that we were going to make the actual entry with both the primary and the secondary water boilers on the line.

SC Am not reading you now Houston.

CAPCOM All right, how now?

SC Loud and clear.

CAPCOM Okay, there's some question from reading the checklist. It is my understanding that both the primary and the secondary water boilers would be on for the actual entry and don't find a place in the checklist where it's actually turned ON. So we'd like to get confirmation of that and want to make sure that we have all the proper switching to put in the checklist.

SC Okay.

CAPCOM All right, still on page E9 and under step 39 at the bottom of the pyro circuit check there's a

step that says panel 8 all circuit breakers closed except and then it lists five that are printed, one that was printed in ink before launch. It says EDS power circuit breakers 3 open and to be complete we should ought to add the RCS heater circuit breakers. There's two of those and they should also be open.

SC Okay.

CAPCOM All right, the rest of these figures look good. I'm coming over through the graphs. And on page E11 -

SC Roger, I'm with you.

CAPCOM Okay, on step 5 on E11 there's - the first subtitle there is helmets and gloves and the items that follow beneath that are affected by whether you wear suits or come in shirt sleeves. But they do have to be accomplished. And the suit return air valves would actually be open for a shirt sleeve entry. And you should have a line penciled in of optics power to OFF between an emergency cabin pressure valve and the time when the CMP moves to the couch.

SC Right.

CAPCOM Okay. And the steps shows the recorder to rewind at minus 30. That's an onboard step rather than a ground step. Just to verify that.

SC Okay.

CAPCOM Okay. Under step 6 almost at the bottom in fact it's three lines from the bottom of the step 6, there's a section that says secondary coolant loop evaporator to RESET and should be a note that that's 58 seconds if you hold it in reset prior to moving the pump off.

SC That's it; I've seen it.

CAPCOM Okay. Okay, the next comment is on page E13.

SC Okay, I'm there.

CAPCOM All right, this is a general comment that refers to any time you're working around P62 or when you're going between P62 and P63. And you should be careful not to call an extended VERB during this time. This is during the program notes and it is just a reminder. Now what will happen if we get into an extended VERB such as an 83 or an 82? We may get hung up in P62 and have to recycle through it in order to get to 63. And neither of these displays are normally used, just a good practice. And we're just trying to remind you that we don't want a call an extended VERB while we're in P62.

SC Okay...that's right.

CAPCOM Out. Okay.

END OF TAPE

CAP COM Okay, and going through the rest of it, we didn't find any other things to make comments on. You have all the latest corrections in your checklist.

SC Roger. The main thing that is to come up is with a way to determine that the boiler - water boiler is not dry and make sure that Bill gets it activated at TMSM 7.

CAP COM That is correct. And we will talk to you some more about that the next time we catch both you and Bill up.

SC Righto.

SC Ken, this is Frank. I am going to be off the headset for about 5 minutes.

CAP COM Okay, fine. When you come back, I will have systems rundown for you.

SC Fine.

END OF TAPE

APOLLO 8 MISSION COMMENTARY, 12/26/68, GET 1151130, CST 2:02a 349/1

No comments recorded on this tape

END OF TAPE

PAO This is Apollo control at one hundred fifteen hours and 19 minutes. At the present time our space craft is at an altitude of 137 thousand 374 nautical miles from earth and traveling at a speed of 4 thousand 895 feet per second. Capsule communicator Ken Mattingly has just received the call from Frank Borman, we'll pick up that conversation now.

CAP COM OK, loud and clear.

SC Back with you.

CAP COM OK. I've got a few good words for you. The eraseable memory has been taken completely apart and looked at and it looks like it's all OK. Your POI didn't have any effect. The one thing that might be questionable is if you used a VERB 67 when you get to the noun 99 display you may find that one to be unreliable and what your going to get there is the - that's an error display for the W matrix and it's something you probably won't be using again anyhow and if the occasion arises we can update that one but its not a normal used display and everything else, all the operational functions are good.

SC Very good.

CAP COM OK. As of a hundred and 14 hours,.your battery: you had battery with A 39.32 amp hours, battery B had 35.21 and battery C 38.46. Your cryo quantaties remaining at set were the same when we gave you the last time 180 pounds of oxygen per tank and 11 pounds of hydrogen per tank. At present the service module RCS, using the computer values for the quantities, you have quad A with 55% Bravo with 50, Charlie with 58 and Delta at 48. What we plan to do with the secondary tanks is to go ahead and turn them on at 37% actual and in the event of lost com or something like that recommend that you use 50% on board gaging as being the time to turn the secondary prepelt on. However as long as we can use our own calculations well we might as well leave them tied up. We probably won't get into the secondary propellants prior to entry anyhow.

CAP COM OK. A couple of items on the, check up on. I'd like to confirm that the hatch dogs will be taken off while your on the shoots if you can if not your going to do that in the water.

CAP COM OK. Now we've got a little better signal. Like to confirm that the hatch clamps on the side hatch will be taken off either on the shoots or in the water which ever you can get to. Is that affirmed?

SC Roger. That's affirmed. As a matter of fact we didn't even put them on.

CAP COM OK. Do you plan to put them on for an entry?

SC I don't think so. It's held pretty well so far.

CAP COM OK. And we realize we never did find out what happened to the mae west. Did you leave it blown up or did you dump it?

SC We dumped it.

CAP COM OK. Who is the lucky guy?

SC The same guy that tried to launch it this afternoon.

CAP COM OK and just as a gee wiz item your now a 137 915 out and you only accelerated the 4883 you might check to make sure you don't have a speed brake hanging. Those are nominal values.

SC 137 thousand miles out?

CAP COM Confirmed

END OF TAPE

APOLLO 8 MISSION COMMENTARY, 12/26/68, GET 1152900, CST 2:19 351/1

NO COMMENTS RECORDED ON THIS TAPE.

END OF TAPE

PAO This is Apollo control at 115 hours 46 minutes and just about 10 minutes ago we had a change of watch aboard the spacecraft. Bill Anders who had been sleeping for about 4 hours awoke and came on the circuit to advise that Frank Borman was now attempting to get a better rest. Now we're in conversation with Anders at the present time, we'll pick that up for you now.

CAP COM Loud and clear

SC Good morning or good afternoon what ever it is JOB backup.

CAP COM OK

CAP COM Looks like all the senior guys have the mid watch.

SC I know what you mean. It'd be a good time to try out your ...

CAP COM OK. We'll try it out a little later. Apollo 8 Houston, Apollo 8 Houston.

CAP COM OK. I guess we should start off with a little dialogue about sleep. How much do you have.

CAP COM Ok. I guess we can figure that out for our selves can't we? OK it's now 142 hours. Just try to find out how soundly you slept. I guess your not that sleepy.

SC ...

CAP COM OK. That's really about 4 hours.

SC OK, good.

CAP COM Apollo 8 Houston. Have you got somebody under the left couch or can you get down to the water control panel? What we were thinking about doing is blowing a little out of the cecondary evaporator to check it out, just as a component check something we need to do but if there's somebody down there we can do that some other time.

SC Yeah, that'd be fine. That's a kind of tedious process and I figured we'd kind of keep our eyes out so we'll have some idea of prior entry if we plan on having two loops or one. We start our lead to center another question we're trying to pin down. Two questions infact. Number 1 we'd like to verify that you do plan to use both primary and secondary boilers during the actual entry and we're also looking for a way of checking the primary boiler to make sure it isn't dryed out prior entry and that's turning to a little more of a challenge than you might suspect Do you have any thoughts so we can go over that?

SC We do plan to use both. Before we get into water boiling problem I figure I'd like to take a seconal also to make sure I get off to sleep here.

CAP COM OK. That's a go.

SC OK. On the water boilers. It's interesting that I can get my own, I was going to say that any time you have your mike I can hear myself talking with about a 2 second time delay. Lets stick to the primary and secondary

SC boilers check. I think it would be a good idea to make sure we've got them both prior to entry and have the reservicing procedures handy.

CAP COM You know the secondary, in fact both reservicing procedures are available on the malfunction book. And some of the problem with checking out the primary boiler is finding a way to make it boil on the way in.

SC Yeah. Just a second Jim. I've got another little chore going here. It looks like the only way we're going to be able to do would be to shut off the radiators.

CAP COM We were looking for a little more doubtful way to do that.

SC Roger. That would be agreeable to me. A little more doubtful way but it shouldn't freeze up if we get it quickly.

CAP COM We're talking over several things like putting the ten pin valves in manual or partially closing it or some of these different ideas. Something you can think about while you're laying there with nothing else to do

SC Yeah. We've noticed that it's gotten warmer in this cockpit, coming back than it was going out. I remember going out we manually positioned the ten pin valve, but we had pretty good control over the glycol evap outlet temperature. So approximately that'd be the thing to try first rather than the radiators.

CAP COM OK. We've got backroom boys looking at it too.

SC I guess that if we just pick a time we ought to pick a time so if something did go haywire we could afford to boil in full the rest of the way in but still leave us enough time to make sure we've got the evap service if it didn't work.

CAP COM Confirm. We're factoring in things like that. Forget reconsiderations and all that sort of thing.

SC Right. Maybe the second Derivative of the water boiler versus time clock will give it the optimum time to do it.

CAP COM There's also speculation you have a code on board that gives that information.

SC Well if I don't I'm sure those guys can gin one up, they've done some other pretty good ones.

CAP COM It's also been suggested that if you don't have the chart it's on the tape recorder.

SC Well if I don't have a chart I'll put it on the tape recorder.

SC I think, unless you guys have some more comments along those lines maby we ought to give these guys a chance to get some sleep and I'll reply here for a while unless you've got something to brief me on go ahead but I keep my

SC answers to yeses and no and what ever else you think you really need.

CAP COM OK. Fine Bill and I'll check with you like every 30 minutes just to make sure we have a word of contact.

SC OK. I've got some writing to do and what not so keep an eye on the distance and angles and well be all right.

CAP COM AOK

SC And Ken if your decon man wants to play the object of which game, we're on Bravo at this time - but also configured for D's, of course D is also configured for Bravo, if you want to switch, go ahead.

CAPCOM Okay. We are cranking up some background music for you. - We can use your humming for a back up ranging in case everything else fails.

SC Rog.

CAPCOM Apollo 8, Houston, you don't need to answer this transmission, but doctors observe that it looks like some of your sensors may be working loose, so you might just kind of push on them and see if they are in place.

SC Did that do any good.

CAPCOM No, it looks like it is one of your sternals, Bill. - Apollo 8, we can't handle the OMNI switching for about thirty minutes, til we get back to an 85 foot disk, so you will have to watch the antenna store for a few more minutes.

END OF TAPE

SC Houston, Apollo 8. Over.
CAP COM Loud and clear.
SC Good morning, or afternoon, or what ever it is. The JOD is back at the COMM. CDR went back to bed.
CAP COM Okay.
CAP COM Looks like all the junior guys have the midwatches.
SC I know what you mean. I had a little sleep earlier, so I am pretty well rested and want to make sure Jim gets a good snooze here prior to entry. This might be a good time to try out your background music, and see if you have any better luck.
CAP COM Okay, we will try that a little later.
CAP COM Apollo 8, Houston.
CAP COM Apollo 8, Houston.
SC Go ahead, Houston.
CAP COM Okay, I guess we should start off with a little dialogue about sleep. How much did you have?
SC Well, let's see. Whenever it was I told you I went to bed last night until now. Just a second and let me check the flight plan. Have you got it logged in whenever I asked for that last Seconal?
CAP COM Okay, I guess we can figure that out for ourselves, can't we?
SC Yes, why don't you let me know. I have kind of lost track of time it was when I went to bed, but I went to sleep about 15 minutes after that and woke up about 10 minutes ago. Good sleep.
CAP COM Okay, so I see it is now 142 hours
SC What do you think I am, Rip van Winkle?
CAP COM Just trying to find out how soundly you really slept. I guess you are not that sleepy.
SC (echo)
CAP COM Okay, it is really about 4 hours.
SC Okay, good.
CAP COM Apollo 8, Houston. Have you got somebody under the left couch, or can you get down to the water control panel?
SC I can get down there. Frank hadn't quite gone to sleep yet.
CAP COM Well, what we were thinking about doing was, boil a little out of the secondary evaporator, check it out, just for a component check, something we need to do, but if there's somebody down there, why we can do that some other time.

SC Well, if it boils we are going to know it before - it won't take long to find out if won't boil down, a heck of a lot we can do about it, so why don't we wait until someone else wakes up here, Mike wakes up again.

CAP COM Yes, that would be fine. There is something you can do. You can reservice this and it is kind of a tedious process, and that's the reason why we just want to kind of keep our eyes on it so we will have some idea prior to entry we can count on having two loops or one. Which kind of leads us into another question, we are trying to pin down. Two questions, in fact. Number one - we would like to verify that you do plan to use both primary and secondary boilers during the actual entry and we are also looking for a way of checking the primary boiler to make sure it isn't dried out prior to entry. And plus turning the interim a little more of a challenge than you might suspect. If you have any thoughts on that subject we will go with that.

SC The answer to the question is yes. We do plan to use both. Before we get into the water boiler pump though, I would like to take a Seconal also. Make sure I can get off to sleep here.

CAP COM Okay, that's go.

SC Okay, on the water boilers, - interesting that I get - I was going to say anytime you have your mike keyed, I can hear myself talk with about a 2-second time delay. With respect to the primary and secondary boiler checks, I think that is a good idea to make sure we got them both. Prior to entry and have the reserve procedures handy.

CAP COM Roger. You know the secondary - well, in fact, both reservicing procedures are available in a malfunction book and sort of the problem with checking out the primary boiler is finding a way to make it boil, on the way in.

SC Yes, just a second, I got another little chore going here. Roger. It looks like the only way I will be able to do it would be to shut off the radiators.

CAP COM We were looking for a little more docile way to do that.

SC Roger. That way would be agreeable to me too, more docile way. But, should't freeze up if we did it quickly.

CAP COM Roger. We are talking over several things, you know, like, putting the ... valve to manual or partially closing it or some of these different ideas. And something

CAP COM you can think about while you are laying there with nothing else to do.

SC Yes, we noticed that it had gotten warmer in here, cockpit, coming back than it was going out. And I remember going out when we manually positioned the 10-pin valve, but we had pretty good control over the gylcol evap outlet temperature. So possibly that would be the thing to attack first rather than the radiators.

CAP COM Okay, we have got the back room boys looking at it.

SC I guess if we didn't pick a time though

END OF TAPE

CAP COM ... omni switching for about 30 more minutes, until we get back to an 85-foot dish. So you will have to watch the antenna store for a few more minutes.

SC Okay, I don't see any loose sensor - the upper - upper - are you trying to call us?

CAP COM No, I didn't. It sounded like you were getting an echo and I checked and I hadn't held the key down at the time either.

SC Okay. I don't see any loose sensors, but the upper sternal is beginning to irritate a little bit, but not badly. And possibly there is something going on there.

CAP COM Okay, and did you copy about the antenna?

SC They really disappoint me, but I'll keep that in mind.

PAO This is Apollo Control. That appears to be all the conversation for now. We will stand by to come back up when next we hear from the spacecraft. At 115 hours 59 minutes into the flight of Apollo 8, our velocity is 4940 feet per second and our altitude 135 462 nautical miles. This is Mission Control Houston.

END OF TAPE

PAO This is Apollo Control. 116 hours 21 minutes. At the present time, we are talking with Bill Anders aboard the spacecraft. A short while ago we attempted to play up some background music, as requested by the crew and met with marginal success. On that we will pick up the conversation ensuing - following that attempt.

CAP COM Apollo 8, Houston. Radio check.

CAP COM Apollo 8, Houston. In the blind. We are not receiving downvoice, we have data and it appears that it is probably a ground problem. Apollo 8, Houston.

SC Roger, Houston. Read you loud and clear.

CAP COM Okay. I got you that time. I take it you were able to copy with the music? Is that affirm?

SC I was able to copy you all the time, Ken, but I could only hear the music when you were trying to transmit and I wondered if you noticed cycling on my suit power switch when you - when you called me. I am hearing an echo now.

CAP COM By time you copy your echo. And what switch were you cycling?

SC I was cycling the suit power which turns off the BIOMED periodically. I figured that would wake the doctors up.

CAP COM It appears that we have more than one communications problem.

SC Roger.

SC We need the high gain, Houston. Will omni be okay?

CAP COM 8, Houston. That's negative. --

SC Be advised that my - I am hearing these echos quite a bit of the time and if you are trying to play music, I am not hearing it.

CAP COM Roger. We understand and we are not trying to play music right now.

SC Okay, who is this? Comm Tech?

CAP COM Ken is only human. This is his substitute. This is Flight Director.

SC Oh, I didn't recognize your voice there.

CAP COM I don't get to talk often.

SC Who is substituting for you now, Flight - Director?

CAP COM DFD.

SC Okay. Looking pretty good from here. How about down there?

CAP COM It couldn't be better.

SC You guys are doing a great job. I appreciate it.

CAP COM Apollo 8, Houston. Going to be handing over sites at 25. I will make a voice check with you when we come up on the new site and the ground says thank you for your kind words.

SC Okay, we will be standing by.

CAP COM Apollo 8, Houston. Through Honeysuckle.

SC Roger, Houston. Loud and clear.

CAP COM Okay, Bill and our BIOMED data still looks a little bit squirrelly. How about checking the blue signal conditioner on your BIOMED harness. You have one connector. It should be the center package; has a blue patch on it. You kind of check that and I wonder if you have changed the BIOMED harness recently. If you have, this might have caused some problems.

SC Roger, I was just cracking open some acorns here for breakfast. Let me put them down and I will check my BIOMED leads.

CAP COM There is no rush on it.

SC Everything is in ship shape.

END OF TAPE

APOLLO MISSION COMMENTARY, 12/26/68, GET 1163100, CST 3:22A 355/1

NO COMMENTS ON THIS TAPE.

END OF TAPE

APOLLO 8 MISSION COMMENTARY, 12/26/68, GET 1164500, CST 3:36 356/1

PAO This is Apollo Control at 116 hours, 45 minutes. At the present time Apollo 8 is traveling at a speed of 4993 feet per second. And our altitude is 133 267 nautical miles above earth. We've had no further contact with the spacecraft since our last report. We are anticipating another attempt shortly to play up some music to the crew. And at this time aboard the spacecraft Bill Anders is standing watch. Both Frank Borman and Jim Lovell are in sleep periods at the present time. We will continue to standby for any call to Anders and for that next attempt to play up some music.

END OF TAPE

PAO This is Apollo Control, 116 hours, 52 minutes. CAPCOM Ken Mattingly has just put a call to the crew. We'll pick up that conversation now.

CAPCOM Apollo 8, Houston. Apollo 8, Houston.

SC Go Houston.

CAPCOM Okay, Bill. We're ready to try this music on a different kind of lash up this time. What I'd like to do in order to make sure that we maintain voice comm is when you get it if you would give us a call and tell us you have the music and any comment about its relative volume or anything like that. And if I get your call, then I'll call you back and tell you and what will happen is when I go to talk to you we'll talk the music link. And we can go ahead and take over the switching of the antennas if you like.

SC Okay, I'm in BRAVO DOG switch configuration and go ahead with the music. Be advised last time the fidelity was low and the volume was too high.

CAPCOM Okay. And if you'll give us the same kind of comment hopefully, not the same comment but the same type of evaluation, pick it up this time.

SC Play it a little bit and we'll talk about it.

CAPCOM I can barely barely hear it.

SC Need to get the hear louder. That's good.

CAPCOM Playing music. (Herb Albert and Brass)

SC ...

CAPCOM Apollo 8, Houston, how was that?

SC That's real good for background level type, Jim. Maybe you can do some logging in here so that's real nice...a little bit louder but that's good for now.

CAPCOM Okay. That's about the max flying we can take down here so if you want to talk with us you may have to call once or twice. You're just barely phonetic.

SC Okay, try again and - Okay, try again and I'll give you a little louder call and try to keep it quiet.

CAPCOM Oh yeah, listen I was aware you were calling, I just didn't make out what you said. And from now on any time you call, hold off the music and I'll talk to you.

SC Roger, don't hesitate to inhibit.

CAPCOM Jim and Bill we're going to have to wait until we get around to BRAVO before we start switching. Our margin is still a little bit long.

SC Okay, I'll just go ahead and switch it ...

CAPCOM Okay, thank you. Our midnight DVA goes

back on the air.

SC	Right.
CAPCOM	Playing music.
SC	Very clear now.

END OF TAPE

CAP COM Music

APO This is Apollo control Houston at 117 hours 5 minutes. We'll take the circuit down for the time being and come back up the next time we reestablish communications with the spacecraft. At 117 hours 5 minutes, this is Apollo control Houston.

END OF TAPE

APOLLO 8 MISSION COMMENTARY, 12/26/68, GET 1171900, CST 4:10A 359/1

PAO This is Apollo Control at 117 hours, 19 minutes. At the present time the spacecraft is at an altitude of 131548 nautical miles and our velocity continuing to increase now up to 5035 feet per second. We're in communication with the spacecraft. At this time here is how that conversation is going.

CAPCOM Apollo 8, Houston, check your YAW gimbal angle.

SC You must have been reading my mind.

CAPCOM No, the...

SC Oh, okay.

CAPCOM Playing music.

SC Houston, Apollo 8.

CAPCOM Go ahead, Apollo 8.

SC Jim, do you want me to use the high gain when we come around or is the object suspicioned? It doesn't matter to me.

CAPCOM Okay, the OMNI is doing fine. I was just watching your middle gimbal angle there and was getting a little far out.

SC Oh, okay. I thought you - I was too. I thought you said check the disky and I thought you were talking about the high gain that time.

CAPCOM No, I'm sorry. I was just watching umbilical gimbal.

SC This thing really slops around bit dead pan. It's really nice flying otherwise.

CAPCOM Glad to hear that.

SC I have flat used the whole trip as pulse.

CAPCOM You just woke the Doctor up. You said pulse and he came alive. And he'd like to know if you did in fact check out the biomed harness.

SC Yes, I tightened down all the plugs and checked all the lead and everything looked in order. When the other fellows wake up, why don't you remind me and I'll give it a more thorough going over.

CAPCOM Okay, Bill. ...has suggested that they would like to see you try switching the two leads you have a yellow and a blue one and just go ahead and switch them and they'll sacrifice their numograph because they'd rather have the EKG.

SC Do they need it now or can they wait until somebody else wakes up?

CAPCOM I guess we can wait though. Is that a hard thing to get to?

SC You have to take your pants off and about everything else - standby. How's that Houston?

CAPCOM ..take a look at it.

SC Houston, Apollo 8.

CAPCOM All right. Read you. We're looking at data now.

SC My heart has been beating.

CAPCOM We couldn't argue with you. That doesn't help at all. That's pretty bad.

SC We've got problems - we can't use that DSC low bit rate. So that's real good.

CAPCOM Yeah, it's coming in loud and clear. Pretty interesting.

SC Let me tell you it was a hectic revolution.

CAPCOM Playing music.

SC You got the music going? I'm not hearing it.

CAPCOM No, I was waiting to see what we did on that before I started it up again.

SC Okay. If they get home...for a couple of hours and if they have anything at all just tell them I'm alive. Well, I'll get my real good going over here. I might even make a statement to the world that I haven't noticed that the amplifiers got hot.

CAPCOM You say it did get hot?

END OF TAPE